

AFRL technology leads to first Snell-approved display system in commercial safety helmet

by Amy Hill, Ball Aerospace & Technologies Corp.

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — Recreational and professional activities like auto racing, motorcycling, and skiing incorporate speed, agility, and a head—making helmets one of the most effective means of preventing injury, permanent disability, or death.

Recently, the Human Effectiveness Directorate's Crew System Interface Division enhanced the capability of a protective helmet in the racing arena. The directorate's anthropometry expertise, data, and models resulted in the first Snell safety-approved integration of a display system into a BMW Formula 1 racing helmet. Snell is known for its work in setting, maintaining and upgrading the most authoritative helmet standards in the U.S. and throughout the world.

The display system was developed by BMW Group's California-based subsidiaries Palo Alto Technology Office and Designworks USA. However, the Air Force Research Laboratory was requested to find a solution for locating the display within the system as well as to assist in helmet sizing. Anthropometry expertise in the directorate's Human Technology Interface Branch, particularly that of Kathleen Robinette, was an integral part of the project. In fact, Soren Peterson of Designworks USA, a subsidiary of BMW, reported that the explanation of the 3-D anthropometry data from Robinette helped bring about the safety approval by Snell.

The Snell-approved safety helmet demonstrates the Human Effectiveness Directorate's success in collaborating with industry, improving protective equipment, and increasing the potential for integrating display systems in motorbike helmets in the future—a possible benefit to helmet users around the world.

@